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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,454	06/23/2003	Ning Guo	GUON3001/REF	7227
23364	7590	09/12/2007		
BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			EXAMINER HYUN, SOON D	
			ART UNIT	PAPER NUMBER
			2616	
			MAIL DATE	DELIVERY MODE
			09/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/600,454	Applicant(s) GUO, NING <i>len</i>	
	Examiner Soon D. Hyun	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claimed subject matter of the present application is based on the VRRP (Virtual Router Redundancy Protocol). However, Applicant admits that the "VRRP is only used in routers but not in interfaces" (Summary of the Invention, specification, page 2). Therefore, it is contradictory each other that the VRRP is applied for interfaces in a router as recited in the claims 1-4.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Shinomiya (US 2003/0037165).

Regarding claim 1, Shinomiya discloses a method for implementing a router backup with Virtual Router Redundancy Protocol (VRRP), comprising the steps of:

connecting multiple routers (router A and router B) in a virtual router 3 (a router) in FIG. 1, paragraph 0043 (each router in the virtual router is equivalent to an interface of a router in the claim) to a single LAN (HUB 2 in FIG. 1) and adding the routers (interfaces) to a single multicast group (paragraph 0074);

assigning the same virtual router number (1 in FIG. 9A) and virtual IP address (10.15.18.1 in FIG. 9A) to the routers to make the routers join the virtual router;

selecting the main router and backup routers according to their respective priorities among the routers (paragraph 0045); and

sending VRRP multicast packets from the main router to all backup routers periodically and one backup router becoming the main router and replacing the original main router if the backup routers have not received any VRRP multicast packet within a predetermined period (paragraphs 0046, 0069, 0070).

Regarding claim 2, Shinoyama discloses further steps of:

a router (interface) directly becoming a backup router when initiated (paragraph 0078) and becoming the main router if it has not received any VRRP multicast packet within a period (paragraphs 0046, 0069, 0070);

a router becoming the main router after initiated (paragraphs 0045, 0078) if the virtual IP address of the router is identical with its real IP address and assigned a higher priority (maximum priority) to the router (paragraph 0045); and

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a router becoming a backup router if the priority involved in the received VRRP packet is higher than its own priority after comparing with its own priority.

Regarding claim 3, Shinoyama discloses further step of:

keeping the state of a backup router unchanged if the priority involved in the VRRP packet received by the backup router is higher than the priority assigned to the backup router;

a backup router becoming the main router if the priority involved in the VRRP packet received by the backup router is lower than the priority assigned to the backup router (paragraphs 0045, 0046, 0069, 0070).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shinomiya (US 2003/0037165).

Refer to the discussion for claim 1, but Shinomiya does not explicitly teach a backup virtual router. It is known in the art to incorporate a backup device or function to a network device to provide redundancy. Therefore, it would have been obvious to one having ordinary skill in the art to incorporate a backup virtual router to the network of Shinomiya to provide redundancy.

Response to Arguments

7. Applicant's arguments filed 6/26/2007 have been fully considered but they are not persuasive.

Applicant argues (the remarks page 9) that Shinoyama does not teach "connecting multiple interfaces of a router". Examiner disagrees.

As discussed above in the claim rejection, Examiner understands that an interface and a router recited in the claims are equivalent to each router and the virtual router of Shinoyama, respectively, i.e., the claimed subject matter is interpreted as broad as possible, because specific descriptions for the interfaces and the router are not recited in the claims.

Therefore, Examiner believes that the claim rejection is proper.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Soon D. Hyun whose telephone number is 571-272-3121. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


S. Hyun
9/6/2007


CHI PHAM
SUPERVISORY PATENT EXAMINER
9/7/07